

Peter S. Wolf, Ph.D.
February 2, 2001
Page 4

term memory in invertebrate animal subjects such as *Aplysia* and *Drosophila* using the methods as claimed, does not reasonably provide enablement for all subjects suffering from a long term memory defect. The Examiner stated that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The Examiner stated that applicants argue that long term facilitation in *Aplysia* is a long-accepted model for the study of long term memory in primates. The Examiner stated that applicants argue that both invertebrates and vertebrates share the cAMP signaling mechanism which are similar. The Examiner stated that it is not uncommon for certain basic structural features of neurons to remain conserved yet the evolution of neuronal connection is divergent between invertebrates and vertebrates. The Examiner stated that although both vertebrates and invertebrates use ion channels for electrical signaling or cAMP for chemical signaling, invertebrates use non-myelinated giant axons whereas the vertebrates use myelinated axons. The Examiner stated that no one discounts the importance of invertebrate model systems for academic studies, but there is no nexus between the cAMP responsive element block in invertebrates and treatment in higher vertebrates such as primates including human. The Examiner stated that the importance of the model of *Aplysia* taught by Glanzman is not disputed, rather the nexus between the invertebrate and vertebrate model is disputed.

In reply, applicants respectfully traverse the rejection and maintain that one of skill in the art would have been enabled to carry out the claimed invention in view of the specification

Peter S. Wolf, Ph.D.
February 2, 2001
Page 5

combined with what one of skill in the art would have known as of the applicants' effective filing date. Applicants do not concede the correctness of the Examiner's position, however, to accelerate the prosecution of the present application, applicants have amended claims 1 and 15.

Applicants have amended claims 1 and 15 to more particularly point out the claimed invention as being directed to methods for treating an animal with a memory defect due to binding of a cAMP-responsive-element-binding-protein-2 to a transcription factor protein or to DNA associated with cAMP-responsive gene expression, which comprises administering to the animal a compound that inhibits binding of the cAMP-responsive-element-binding-protein-2 having an amino acid sequence identical to the sequence set forth in SEQ ID NO:1 or a human homologue thereof, to the transcription factor protein or to the DNA in an amount effective to inhibit binding and thereby treat said memory defect in the animal.

Applicants submit that these amendments to claims 1 and 15 have rendered moot the Examiner's rejection regarding a nexus between the animal model system and treatment of humans.

Reconsideration and allowance of the present application in view of the foregoing amendments and accompanying remarks is respectfully requested.

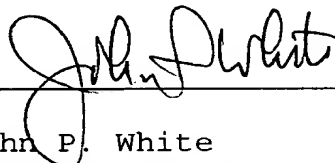
If the Examiner has any questions regarding this Amendment, he is cordially invited to telephone the undersigned attorney.

No fee, other than the \$445.00 extension of time fee, is deemed

Peter S. Wolf, Ph.D.
February 2, 2001
Page 6

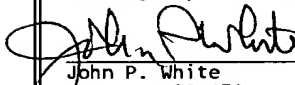
necessary in connection with the filing of this Amendment. If any additional fee is necessary, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:
Assistant Commissioner for Patents,
Washington, D.C. 20231.



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2/7/01
Date